

What is claimed is:

1. A method of maintaining one or more wet-tantalum capacitors in an implantable medical device, with each capacitor having a rated voltage or a maximum-energy voltage, the method comprising:
5 maintaining at least one of the wet-tantalum capacitors at a high voltage relative its rated voltage or maximum energy voltage for a time; and
discharging, after the time, the at least one of the wet-tantalum capacitors through a non-therapeutic load, wherein discharging includes
10 allowing the charge on at least one capacitor to dissipate through leakage current.
2. The method of claim 1, wherein discharging further includes discharging the at least one capacitor through the lead system at rates below a therapeutic level.
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3. The method of claim 1, wherein discharging further includes discharging the at least one capacitor through the lead system at levels that are non-therapeutic.
4. The method of claim 2, wherein discharging further includes discharging the at least one capacitor through a resistor.
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5. The method of claim 4, wherein the resistor includes a resistance value of 1000 ohms.
- 25 6. The method of claim 1, wherein discharging further includes allowing the charge on at least one capacitor to dissipate through system leakage.
7. The method of claim 1, wherein the at least one capacitor is allowed to float for a time before discharging the at least one capacitor.

8. The method of claim 7, wherein the time is about sixty seconds.

9. The method of claim 1, wherein the high voltage is about ninety percent of a rated voltage or a maximum-energy voltage of the at least one capacitor.

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10. The method of claim 1, wherein discharging includes discharging until a voltage level is reached.

11. The method of claim 10, wherein the voltage level is ten volts less than the maximum-energy voltage.

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12. The method of claim 11, wherein the voltage level is the maximum-energy voltage minus ten volts per wet-tantalum capacitor in the system.

13. The method of claim 1, wherein discharging includes discharging for a predetermined period of time.

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14. The method of claim 1, wherein the discharging is internal to the implantable device.

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15. The method of claim 1, wherein maintaining at least one of the wet-tantalum capacitors at a high voltage for a time includes maintaining at a high voltage for about 5 minutes.

16. The method of claim 1, wherein maintaining at least one of the wet-tantalum capacitors at a high voltage for a time includes maintaining at a high voltage for a range of time between about fifteen seconds to ten minutes.

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17. The method of claim 1, wherein the implantable device includes an implantable cardioverter defibrillator.

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18. The method of claim 1, wherein the implantable device includes a pacemaker.
19. The method of claim 1, wherein the method further includes aborting the discharging through the non-therapeutic load if the implantable device detects a condition requiring device therapy.
20. An apparatus comprising:
a lead system suitable for sensing electrical signals of a heart and for delivering electrical therapy to a heart;
a therapy system coupled to the lead system, wherein the therapy system includes a capacitor system to store electrical energy to be delivered in measured doses through lead system, the capacitor system including at least one wet-tantalum capacitor;
a monitoring system coupled to the lead and therapy systems, wherein the monitoring system maintains the at least one capacitor at a high voltage and periodically discharges the at least one capacitor through leakage current; and
an implantable housing containing the therapy, capacitor, and monitor systems.
21. The apparatus of claim 20, wherein the apparatus is an implantable cardioverter defibrillator.
22. The apparatus of claim 21, wherein the high voltage is ninety percent of a rated maximum voltage of the at least one wet-tantalum capacitor.
23. The apparatus of claim 22, wherein the monitor system discharges the at least one capacitor until a predetermined voltage level is reached.
24. The apparatus of claim 22, wherein the monitor system discharges the capacitor for a predetermined period of time.